

A. PURPOSE

The purpose of this practice is to remove nutrients, sediment, and other pollutants from surface runoff by deposition, absorption, plant uptake, denitrification, and other processes, thereby improving water quality. The practice will create shade, lowering water temperature and providing a source of detritus and large woody debris for aquatic organisms.

B. PROGRAM POLICY

Apply this practice to cropland or grasslands immediately adjacent and parallel to:

1. Streams having perennial flow.
2. Seasonal streams, excluding gullies and sod waterways.
3. Sinkholes, karst areas, and other ground water recharge areas.
4. Wetlands permanently or semi-permanently inundated with surface water.
5. Ponds and lakes.

C. ELIGIBILITY

To be eligible for cost share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level.
- Prevent degradation of environmental benefits.
- Be maintained for the expected lifespan of the practice.
- Be included in the approved Wildlife Habitat Development Plan.
- For crop and grassland fields where a buffer area (woods or grassland) already exists between the water body and the field, the following applies:
 - a. If the existing wooded buffer is 30 percent or more of the geomorphic floodplain, or a minimum of 150 feet, cost share is **NOT AUTHORIZED**.
 - b. If the existing wooded buffer is less than 30 percent of the geomorphic floodplain, cost share **IS AUTHORIZED** to extend the existing wooded buffer up to 30 percent of the geomorphic floodplain, or a maximum of 150 feet, whichever is less.

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan (WHDP). This practice shall be cost shared at a rate to meet the minimal needs of the NRCS WHDP.

Eligible Components:

Trees
Shrubs
Planting Costs
Minerals
Eligible Seed
Seedbed Preparation
Herbicide Application
Temporary Cover

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed; (c) needed because of a soil condition such as chemical residue that will not allow establishment of cover immediately; (d) needed on class I soils when natural regeneration of herbaceous vegetation is planned.

E. REQUIREMENTS

The following are requirements for this practice.

1. Riparian forest buffers shall be a minimum of 30 percent of the geomorphic floodplain. The riparian width shall not be less than 35 feet or wider than a maximum of 150 feet. The geomorphic floodplain is determined by one of two methods:
 - a. The width of the floodplain as identified from the soil survey as bottomland and first stream terrace soils.
 - b. The width of the floodplain as identified from a USGS quadrangle map where ridge contours (steepness) begins.

Example:

Geomorphic Floodplain = 120 feet (One Side of Stream)
 $0.3 \times 120 = 36$ feet

Geomorphic Floodplain = 500 feet (One Side of Stream)
 $0.3 \times 500 = 150$ feet

2. The riparian forest buffer may consist of all three zones. Zones 1 and 2 shall be required and meet the minimum width of 35 feet. Zone 3 shall be optional and cannot be less than 15 feet or wider than 30 feet. Zone 3 must be established to native warm season grass/forb mixtures.
3. The planted area shall not be harvested or grazed by domestic livestock for the life of the Long-Term Contract.
4. Practice shall reduce nutrients, sediment, organic matter, pesticides, and other pollutants that are being delivered to receiving waters.

5. Herbicides used in performing the practice must be:
 - a. Federally, state, and locally registered.
 - b. Applied according to authorized registered uses, directions on the label, and other federal or state policies and requirements.
6. A current soil test is required for all permanent, herbaceous plantings. Lime and fertilizer are not required for trees, shrubs, or temporary cover.

F. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g., cultural, wetlands, etc.) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA-25 must be completed for each WHDP.

G. PRACTICE MAINTENANCE

This practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

1. Participant destroys the cover or structure during its lifespan; or
2. Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

H. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

I. SPECIFICATIONS

Approved Cover	Natural regeneration of herbaceous vegetation is an acceptable cover on capability classes I and II soils. With natural regeneration, cost sharing shall only be available for tame grass eradication and a temporary cover, if needed. Areas other than natural regeneration planted to trees and shrubs shall also be eligible for cost share. Approved plant materials are listed below. Substitutions may be allowed subject to prior approval by the WHIP Program Leader or State Biologist.
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For temporary cover (corn) with eastern gamagrass, plant corn at 45-degree angle to the eastern gamagrass rows. Corn should be no-tilled. Plant ten pounds eastern gamagrass about April 1. Apply atrazine for corn following label directions. Plant early maturing corn about June 1 at a rate of 12,000-16,000 (1/7 bu./ac.) plants per acre. Harvest corn as early as possible.

Requirements Temporary cover, when required, is authorized. Corn is authorized as a temporary cover when planted with eastern gamagrass.

A current soil test is required for all permanent, herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs, or temporary cover.

Seedbed For conventional plantings, a firm seedbed is recommended. It should be prepared by plowing and disking (or harrowing) and allowed to settle. For conventionally planted materials, a firm seedbed is recommended. Prepare by plowing and disking (or harrowing) and allowed to settle. Prescribed burning (WHIP 10) may be used as a component for site preparation.

Herbicides Apply herbicides in accordance with the label directions for tame grass eradication or when the no-till method of planting is used.

<u>Eligible Seeds or Plants</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Natural Regeneration	Temporary Cover, if Needed	
Eastern Gamagrass	10.0 lbs.	Dec. 1-July 1
No-till Corn (Temporary Cover)	1/7 bushel (12,000-16,000 corn plants/acre)	

Tall Grass Mixture (Deer/Turkey)

Big Bluestem	1.0 lb. (PLS 1/2)	Dec. 1-July 1
Indiangrass	1.0 lb. (PLS 1/2)	
Little Bluestem	1.0 lb. (PLS 1/2)	
Sideoats Grama	1.0 lb. (PLS 1/2)	
Switchgrass	0.5 lb. (PLS 1/2)	
Kobe/Korean Lespedeza	5.0 lbs.	
or		
Single or Mix of	1.0 lb.	
Illinois Bundleflower		
Partridge Pea		

<u>Eligible Seeds or Plants</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
<u>Short Grass Mixture (Quail/Rabbit)</u>		
Little Bluestem	3.0 lbs. (PLS $\frac{1}{2}$)	Dec. 1-July 1
Indiangrass	0.5 lb. (PLS $\frac{1}{2}$)	
Sideoats Grama	1.0 lb. (PLS $\frac{1}{2}$)	
Kobe/Korean Lespedeza	5.0 lbs.	
or		
Single or Mix of	1.0 lb.	
Illinois Bundleflower		
Partridge Pea		
<u>Broadcast Planting Mixture</u>		
Switchgrass	8.0 lbs. (PLS $\frac{1}{2}$)	Apr. 1-July 1
(Cave-in-Rock, Blackwell)		
Kobe/Korean Lespedeza	5.0 lbs.	
<u>Eligible Seeds or Plants</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
<u>Trees</u>		
Yellow Poplar	12x12 (302/ac.)	Nov. 1-Apr. 1
White Ash	12x12 (302/ac.)	Nov. 1-Apr. 1
Green Ash	12x12 (302/ac.)	Nov. 1-Apr. 1
Hickory	12x12 (302/ac.)	Nov. 1-Apr. 1
Pecan	12x12 (302/ac.)	Nov. 1-Apr. 1
Black Walnut	12x12 (302/ac.)	Nov. 1-Apr. 1
Blackgum	12x12 (302/ac.)	Nov. 1-Apr. 1
Persimmon	12x12 (302/ac.)	Nov. 1-Apr. 1
Cherrybark Oak	12x12 (302/ac.)	Nov. 1-Apr. 1
Willow Oak	12x12 (302/ac.)	Nov. 1-Apr. 1
Sawtooth Oak	12x12 (302/ac.)	Nov. 1-Apr. 1
Nutall Oak	12x12 (302/ac.)	Nov. 1-pr. 1
Shumard Oak	12x12 (302/ac.)	Nov. 1-Apr. 1
Black Oak	12x12 (302/ac.)	Nov. 1-Apr. 1
Pin Oak	12x12 (302/ac.)	Nov. 1-Apr. 1
Water Oak	12x12 (302/ac.)	Nov. 1-Apr. 1
Swamp Chestnut Oak	12x12 (302/ac.)	Nov. 1-Apr. 1
Swamp White Oak	12x12 (302/ac.)	Nov. 1-Apr. 1

<u>Eligible Seeds or Plants</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
<u>Shrubs</u>		
Crabapple	12x12 (302/ac.)	Nov. 1-Apr. 1
Flowering Dogwood	12x12 (302/ac.)	Nov. 1-Apr. 1
Washington Hawthorne	8x8 (680/ac.)	Nov. 1-Apr. 1
Silky Dogwood	8x8 (680/ac.)	Nov. 1-Apr. 1
Indigo Bush	8x8 (680/ac.)	Nov. 1-Apr. 1
Spicebush	8x8 (680/ac.)	Nov. 1-Apr. 1
Wild Plum	8x8 (680/ac.)	Nov. 1-Apr. 1
Chickasaw Plum	8x8 (680/ac.)	Nov. 1-Apr. 1
*Shrub Lespedeza	3x3 (4,900/ac.)	Nov. 1-Apr. 1
(*VA-70, Amquail, Thunbergii)		
Temporary Cover – Summer		
Millet, White Proso	20.0 lbs.	May 1-July 1
Millet, Foxtail	20.0 lbs.	May 1-July 1
Buckwheat	30.0 lbs.	May 1-Aug. 1
Temporary Cover – Winter		
Crimson Clover	20.0 lbs.	Aug. 1-Oct. 1
Winter Wheat	1.5-2 bu.	Sept. 1-Oct. 20
Cereal Rye	1.5-2 bu.	Sept. 1-Oct. 20
Wheat and Crimson Clover	1 bushel; 10 lbs.	Sept. 1-Oct. 20
Rye and Crimson Clover	1 bushel; 10 lbs.	Sept. 1-Oct. 20

^{1/} PLS = Pure Live Seed